AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. – 28. (Canceled)

29. (Previously Presented) A method comprising:

providing a network access device with an authorized level of service including at least a maximum bandwidth or data bit rate over a shared upstream channel, the upstream channel shared with at least one other network access device; and

denying service to the network access device if a requested bandwidth or bit rate by the network access device exceeds a maximum bandwidth or data bit rate of the authorized level of service.

30. (Previously Presented) The method of claim 29, further comprising:

supervising a connection of the network access device.

31. (Previously Presented) The method of claim 30, further comprising:

storing connection statistics of the network access device and of the at least one other network access device in a link access controller; and

forwarding the connection statistics to a network control computer.

32. (Previously Presented) The method of claim 31, wherein the step of forwarding the connection statistics comprises:

forwarding the connection time and the time of connection to the network control computer.

33. (Previously Presented) The method of claim 31, wherein the step of storing connection statistics comprises storing at least one of:

the source and destination addresses of the network access devices; and

the total amount of data transmitted.

34. (Previously Presented) The method of claim 29, further comprising:

storing preauthorized level of service data for subscribers; and

communicating the preauthorized level of service data to the link access controller for regulating service at the preauthorized level.

35. (Previously Presented) The method of claim 30, further comprising:

storing connection statistics of the network access device and the at least one other network access device in a link access controller; and

forwarding at least a portion of the statistics to an administrative computer.

36. (Previously Presented) The method of claim 34, wherein the step of forwarding at least a portion of the statistics includes:

forwarding statistics representing data for a session of one of the network access devices.

37. (Previously Presented) The method of claim 29, further comprising:

policing a connection of the network access device to assure the authorized level of service for the identified network access device.

38. (Previously Presented) The method of claim 37, further comprising:

temporarily denying and delaying forwarding information from the network access device if the network access device attempts to send the information at a rate exceeding its authorized level of service.

39. (Previously Presented) The method of claim 38, further comprising

discarding the information from the network access device if the amount of information to be transmitted from the network access device exceeds the ability of the link access controller to delay the transfer.

40. (Previously Presented) A system comprising:

a network control computer for detecting parametric data related to an originated communication from a network access device; and

a link access controller for policing a connection of the network access device to assure an authorized level of service for the network access device, the authorized level of service comprising at least a maximum bandwidth or data bit rate over a shared upstream channel.

41. (Previously Presented) The system of claim 40, wherein the link access controller is configured to:

temporarily deny and delay forwarding information from the network access device if the network access device attempts to send the information at a rate exceeding its authorized level of service.

42. (Previously Presented) The system of claim 41, wherein the link access controller is further configured such that if the amount of information to be transmitted from the network access device exceeds the ability of the link access controller to delay the transfer, the information from the network access device is discarded.

43. (Previously Presented) The system of claim 40, wherein the link access controller is further configured to:

deny service to the network access device if a requested bandwidth or bit rate by the network access device exceeds a maximum bandwidth or data bit rate of the authorized level of service.

44. (Previously Presented) The system of claim 40, wherein the parametric data comprises a start time and a length of connection of the network access device.

45. (Previously Presented) The system of claim 40, wherein the parametric data comprises a count of total cells transmitted.

46. (Previously Presented) The system of claim 40, wherein the link access controller is further configured to transmit data from the link access controller to a local switch.

47. (Previously Presented) The system of claim 40, wherein the link access controller is further configured to:

maintain statistics about the connection, and at the end of the connection, forward at least a portion of the statistics to an administrative computer.

48. (Previously Presented) A system comprising:

a network control computer configured to:

receive a request for service at an identified bit rate from an identified network access device, the request for service comprising at least a maximum bandwidth or data bit rate over an upstream channel shared by at least one other network access device;

allocate a maximum bandwidth or data bit rate for an authorized level of service for the identified network access device;

compare the authorized level of service with the identified bit rate; and

compute a route for a communication from the identified network access device if the authorized level of service exceeds or is equivalent to the identified bit rate.

49. (Previously Presented) The system of claim 48, further comprising:

a link access controller for issuing a data grant to the identified network access device.

50. (Previously Presented) The system of claim 49, wherein the data grant issued by the link access controller comprises:

a time of day;

a number of cells; and

an authorized data rate for transmission of the number of cells.

51. (Previously Presented) The system of claim 49 wherein the link access controller is further configured to store parametric statistics related to the authorized level of service.

52. (Previously Presented) The system of claim 51, wherein the parametric statistics comprise a bandwidth of the connection of the identified network access device.

53. (Previously Presented) The system of claim 51, wherein the parametric statistics comprise a start time and a length of connection of the identified network access device.

54. (Previously Presented) The system of claim 49, wherein the link access controller is further configured to:

police a connection of the identified network access device to assure the authorized level of service for the identified network access device.

55. (Previously Presented) The system of claim 54, wherein the link access controller is further configured to:

temporarily deny and delay forwarding information from the identified network access device if the identified network access device attempts to send the information at a rate exceeding its authorized level of service.

56. (Previously Presented) The system of claim 55, wherein the link access controller is further configured such that if the amount of information to be transmitted from the identified network access device exceeds the ability of the link access controller to delay the transfer, the information from the identified network access device